IN THE CLAIMS:

Please re-write the claims as follows:

1. (Currently Amended) A method for programming a pattern matching engine having a plurality of information storage entries with one or more regular expressions, each regular expression including a plurality of characters and having a corresponding action to be applied to matching strings, the method comprising the steps of:

identifying one or more borders within a given regular expression, the one or more borders separating the given regular expression into a plurality of sub-expressions, at least one sub-expression having a plurality of sequential characters; and

loading one or more entries of the pattern matching engine with a plurality of the sequential characters from at least one sub-expression, wherein the borders are defined by a predetermined sequence of regular expression metacharacters, the entries stored in content addressable memory (CAM).

2. (Currently Amended) The method of claim 1 wherein the predetermined sequence of regular expression metacharacters are a wildcard metacharacter is a first regular expression metacharacter defined to match any one character followed immediately by a second regular expression metacharacter defined to match the preceding repeat last character zero, one, or more times metacharacter.

3. (Original) The method of claim 1 further comprising the step of organizing at least part of the pattern matching engine into a plurality of sections, and wherein each section of the pattern matching engine is loaded with a plurality of search patterns for a corresponding sub-expression.

4. (Currently Amended) The method of claim 3 wherein the entries of a given section are loaded with ~~one of~~ a search pattern that includes a complete match of the respective sub-expression, a search pattern that includes a partial match of the respective sub-expression, and a mismatch pattern.

5. (Original) The method of claim 4 further comprising the steps of:

associating at least one sub-expression with a current state variable; and

loading the associated current state variable into each entry of the section of the pattern matching engine that contains the at least one sub-expression.

6. (Original) The method of claim 5 wherein the pattern matching engine has at least one content addressable memory (CAM) loaded with the one or more regular expressions.

7. (Currently Amended) The method of claim 6 wherein

the CAM is a ~~ternary content addressable memory (~~TCAM~~)~~ that supports don't care values, and

~~the mismatch pattern includes all don't care values~~

<u>each regular expressions loaded to the CAM is loaded as a plurality of search patterns including a mismatch pattern having all don't care values</u>.

8. (Currently Amended) ~~The method of claim 7 wherein~~ <u>A method for programming a pattern matching engine having a plurality of information storage entries with one or more regular expressions, each regular expression including a plurality of characters and having a corresponding action to be applied to matching strings, the method comprising the steps of:</u>

4